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EXAMINER

TRAN, PABLO N

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2618

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/526,565	Applicant(s) NAGHIAN, SIAMAK	
	Examiner Pablo N. Tran	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 6,22,33 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-21,23-32,35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/21/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent, granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5, 8-11, 13-15, 19-21, 23-25, and 27-29, 31-32, and 35-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen (6,744,740).

As per claims 1-5, 21, 23, 31-32, and 36, Chen discloses a method of routing a message from a source node to a destination node in a wireless network, wherein transmitting a first message from a source node to a destination node along a plurality of paths, wherein the plurality of paths includes a first path, and wherein the first path includes a first intermediate node and a second intermediate node; generating a first time stamp and a second time stamp at the first intermediate node, wherein the first time stamp corresponds to receipt of the first message at the first intermediate node and the second time stamp corresponds to transmission of the first message from the first intermediate node to the second intermediate node; generating a third time stamp and a fourth time stamp at the second intermediate node, wherein the third timestamp

corresponds to receipt of the first message at the second intermediate node and the fourth time stamp corresponds transmission of the first message by the second intermediate node; calculating a propagation delay between the first intermediate node and the second intermediate node, wherein the propagation delay comprises a difference between the second time stamp and the third time stamp; selecting the first path from the plurality of paths for communication between the source node and the destination node based at least in part on the propagation delay (fig. 12A-12D, col. 8/ln. 33-45, col. 9/ln. 44-col. 11/ln. 2. Although the specification of the instant Application does not explicit stated the claimed limitation (a first time stamp, a second time stamp, and etc..) but such method of discovery and/or request message, wherein recording the time of transmission and reception of the message at every node and calculate the total journey time for an acknowledge message to propagate from/to a source node and a destination node [0041, 0046, 0048, 0050, 0052, 0058]. However, such method of time stamping is widely known in the art. Chen disclosed such method of discovery and recording the message's time stamp at each and every node and selected a path that has the shortest calculated travel time).

As per claims 8-9 and 24, as stated above in claim 1, Chen further discloses measuring and stored a signal quality and selecting the path based at least in part on the measured signal quality (col. 4/ln. 40-52, col. 5/ln. 1, col. 5/ln. 46, col. 14/ln. 20-21, col. 14/ln. 34-35).

As per claims 10-11, 25, and 35, as stated above in claim 1, Chen further discloses calculating and stored a distance and selecting the path based at least in part on the calculated distance (col. 4/ln. 40-52, col. 4/ln. 65, col. 5/ln. 5-16).

As per claims 13 and 27, as stated above in claim 1, Chen further discloses measuring power attributes and selecting the path based at least in part on the measured power attributes (col. 4/ln. 40-52, col. 7/ln. 21-31).

As per claims 14 and 28, as stated above in claim 1, Chen further discloses assessing a link stability and selecting the path based at least in part on the assessed link stability (col. 4/ln. 40-52, col. 7/ln. 21-31, col. 14/ln. 20-21, col. 14/ln. 34-35).

As per claims 15 and 29, as stated above in claim 1, Chen further discloses assessing a required QOS stability and selecting the path based at least in part on the assessed QOS (col. 4/ln. 40-52, col. 7/ln. 21-31, col. 14/ln. 20-21, col. 14/ln. 34-35, col. 14/ln. 28-31).

As per claim 19, as stated above in claim 1, Chen further discloses an adhoc wireless network (col. 1/ln. 41).

As per claim 20, as stated above in claim 1, Chen further discloses the intermediate node is a mobile station (fig. 1, col. 3/ln. 45-65).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (6,744,740).

As per claim 7, as stated above in claim 1, Chen disclose the method of selecting a path that has the shortest total travel time but not explicitly the message's processing delay at a node. However, it would have obvious to one of ordinary skill in the art to provide such method of calculating the propagation delay (message's travel time from one node to the other node) and processing time to Chen in order to select a path that has the shortest total travel time to/from a source node and destination node.

5. Claims 12, 16, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (6,744,740) in view of Chuprun et al. (6,115,580).

As per claims 12, 16, and 26, Chen suggested such method of optimal path based upon various criteria but not explicitly based upon velocity. However, Chuprun et al. taught such method (col. 11/ln. 38-42). Therefore, it would have been obvious to one of ordinary skill at the time of invention for the Chen to utilize such method, as taught by Chuprun et al., in order to enhance connectivity in a wireless communications network by intelligently selecting the wireless links that provides the optimal connections between nodes in the network.

6. Claims 17-18 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (6,744,740) in view of Baratz et al. (4,873,517).

As per claim 17, as stated above in claim 1, Chen further discloses such routing algorithm (col. 2/ln. 33-50) but not explicitly the claimed limitation. Baratz et al. teaches such method (fig. 4, fig. 5, col. 4/ln. 48- col. 5/ln. 53). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for Chen to utilize such teaching of Baratz et al. in order to reduce time in selecting the optimum route.

As per claims 18 and 30, as stated above in claim 1, Chen further discloses such selection process to select the optimum route based upon RSSI, shortest time, least number of hop, distance, or some other measured metrics but not explicitly a mapping value that indicate a degree to which a measured parameter value meets a predefined parameter value. Baratz et al. teaches such method (fig. 4, fig. 5, col. 4/ln. 48- col. 5/ln. 53). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention for Chen to utilize such teaching of Baratz et al. in order to reduce time in selecting the optimum route.

Conclusion

7. Applicant's arguments with respect to claims 17-18 and 30 have been considered but are moot in view of the new ground(s) of rejection. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (571)272-7898. The examiner normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the examiner by telephone are

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unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) System. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-directauspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 30, 2008

/Pablo N Tran/

Primary Examiner, Art Unit 2618